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National Commission for Stratigraphy Belgium

NCS meeting report 23/12/2021

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1 Administrative section

The Chair opens the meeting at 10h05.

1.1 Presence list

Present: Bernard Mottequin (BM, President), Kris Welkenhuysen (KW, Secretary, Webmaster), Frieda Bogemans (FB), Bernard Delcambre (DB), Michiel Duser (MD), Alain Herbosch (AH), Stephen Louwye (SL), Jacques Verniers (JV), Johan Yans (JY)

Excused: Katrien De Nil (KD), Vanessa Heyvaert (VH), Jonathan Michel (JM), Edouard Poty (EP), Marie Coen-Aubert (MC)

Invited: Kris Piessens (KP)

1.2 Approval of the previous meeting report

The report of the 2020 meeting, available on the website, did not raise any remarks and is approved.

1.3 Approval of the agenda

The agenda is approved.

2 Reports of the subcommissions

2.1 Lower Palaeozoic (JV)

Activities

Mostly online.

Publications

Candela, Y., Marion, J.-M., Servais, T., Wang, W., Wolvers, M., Mottequin, B. 2021. New linguliformean brachiopods from the lower Tremadocian (Ordovician) of the Brabant Massif, Belgium, with comments on contemporaneous faunas from the Stavelot–Venn Massif. *Rivista Italiana di Paleontologia e Stratigrafia*, 127(2), 383–395.

Herbosch, A. 2021. Stratigraphic correlations between the Brabant Massif and the Stavelot, Rocroi and Givonne inliers (Belgium) and geological implications. *Geologica Belgica*, 24, 137-157.

Mortier, J., Vanmeirhaeghe, J., Harper, D., Storch, P., Zalasiewicz, J., Van den haute, P., Deckers, J., Mestdagh, J., Pille, T., Verniers, J. (to be submitted: Jan 2022). Stratigraphy and biostratigraphy with chitinozoans of the uppermost Ordovician and Silurian of the Condroz Inlier. *Memoirs of the Geological Survey of Belgium*. (The publication of PhD Jan Mortier (2014), slightly reworked and updated).

Pereira, S., Colmenar, J., Mortier, J., Vanmeirhaeghe, J., Verniers, J., Štorch, P., Harper, D. & Gutiérrez-Marco, J.C. 2021. Hirnantian fauna from the Condroz Inlier, Belgium: another case of a relict Ordovician shelly fauna in the Silurian? *Journal of Paleontology*, 95(6), 2021, 1189–1215.

One publication close to be accepted by A. Herbosch & F. Boulvain Chap. 8.1 Ardenne In *Geology of the Central European Variscides and its Avalonian-Cadomian precursors* (U. Linnemann, Editor).

Plan for 2022

We continued on the revision of the Silurian in Belgium 20 years after the 2001 synthesis (the article requested for the medaille Vandenbroeck). We plan to present a first version at the SGF & SGN congress in Givet 19 April 2022. There will be excursions (20-23 April 2022). One excursion will be led by us in the Huy area (Ordovician-Silurian boundary section in Tihange, the Silurian of the Condroz inlier around Neuville-sous-Huy compared to the Silurian of the Brabant massif in the Mehaigne valley; additionally Devonian in the city of Huy).

in prep. The Mousty Formation: the state of the art. for *Geologica Belgica*.

Members

As mentioned last year, in practice, only two members are active (Alain Herbosch and Jacques Verniers). All others worked to some degree in previous years on the Lower Palaeozoic.

2.2 Devonian (BM)

Activities and plan for 2022-2023

Many formations and members have been introduced in the literature since the publication of the overview by Bultynck & Dejonghe (2002), notably those recognised during the geological mapping campaign in Wallonia, but an overview is badly needed. However, things are progressing because a team of researchers is now involved in this task and, quite recently several informal field meetings were organised to discuss about the lithostratigraphy of the upper Famennian. Marie Coen-Aubert is currently dealing with the Frasnian succession. The updating of the Lower Devonian, especially that from the Ardenne Anticlinorium and the Neufchâteau Synclinorium, will be the most important task of the SDS. We should propose a revision of the Devonian lithostratigraphy probably in 2023, likely in the forms of separate papers.

2.3 Carboniferous (BM)

Activities and plan for 2022–2023

Although the lithostratigraphy of the Belgian Carboniferous is particularly stable in contrast to its Devonian counterpart, a new synthesis, better documented notably in terms of iconography and sequence stratigraphy, should be proposed in the next two years.

Publications

Dreesen, R., Poty, E., Mottequin, B., Marion, J.-M., Denayer, J. 2021. An exceptional lower Carboniferous historical heritage stone from Belgium, the Meuse Limestone. *Geoheritage*, 13:100.

2.4 Permian-Triassic-Jurassic (MD)

Activities

Two proposals were submitted to the NCS on 15 June 2021 for discussion and approval: (1) an update on the Luxembourg and Arlon formations; (2) the promotion of the Hondelange Member to formation status. In the absence of objections, both proposals were approved.

Members

Jonathan Michel was promoted to chair of the subcommission in June 2021, replacing Isabelle Bélanger who resigned.

2.5 Cretaceous (JY)

One paper has been published on the Wealdian in the Mons Basin.

2.6 Paleogene-Neogene (SL)

About 15 persons took part in the fieldwork in Rumst on the Boom Formation and Berchem Formation (Edegem Member).

The *Geologica Belgica* volume on the revision of the Neogene stratigraphy is a successful publication. Next step is the revision of the website description through the LIS. Updating of the members has started, and compilation is expected by January. After a discussion period they can be published on the website.

A physical workshop meeting presenting the updated Neogene stratigraphy is planned on 19/04/2022 at the RBINS, followed by a field trip on 20/04/2022.

2.7 Quaternary (FB)

There were no physical meetings or publications since the last NCS meeting.

Stratigraphic work is ongoing in the H3O projects. There are problems identified between modellers and stratigraphers, meetings are organised to find solutions. The modelling work is mainly on well logs, very small groups are working on the Lower Pleistocene. This will lead to subcommission meetings in the next year.

3 Challenges of the NCS (BM)

In 2020 and during the first semester of 2021, we have briefly discussed about the possibility to work on the revision of the lithostratigraphic scale of Belgium as the last global overview dates back to 2002 and to propose a synthetic special volume which would have been published by *Geologica Belgica*. Apart from the articles on the

Lower Palaeozoic of the Brabant Massif and the important volume on the Neogene, there is a significant lack of updating, especially for the Devonian. We know that some recent data have been put online on the NCS website, but in my opinion and probably for most of the NCS members, nothing will replace a real publication in a journal or a book. Furthermore, the NCS depends on the subcommissions and each of them has its own agenda, depending on the activities of its members. Some of them have been involved in an updating process for a long time and it would be inappropriate to interfere in this process. Thus, between the idea, which is attractive, and the reality, there is a gap which appears difficult to fill, so it seems unrealistic to propose a special volume involving all the subcommissions, within a realistic timeframe. Moreover, we find ourselves in a particular period for the transmission of knowledge, both for the old and the new generations of researchers: the former, who has done a lot for lithostratigraphy, and the latter, who probably thinks that everything has been done.

Consequently, I strongly encourage the chairmen and secretaries of the subcommissions to motivate your members in order to publish updated synthetic documents on the lithostratigraphy of our country that will concur to propose an attractive and useful NCS website.

Comments:

JY: What changed in between then and now?

BM: Some SC are more active than others, it is unrealistic to go towards 2022-2023... Suggestion of a synthetic volume later?

SL: For P-N a good revision is possible. It is intended to do an update of Paleogene, similar to the Neogene.

BM: The Geological Survey of Wallonia will now work on lithostratigraphy too.

4 Website (KW)

Slides by KW: the current NCS website runs on an old version of the Drupal content management system. In April support will end and the current website will no longer be visible. Three solutions can be identified: performing an update of the Drupal version, which is estimated to take 5 working days for an external company, but without any other updates; building a completely new website; using the GSB website template and copying the NCS website current content. The latter option is preferred as this also allows adding new functionality, such as a hierarchical database for the units, and moving the unit descriptions to central part of the website. There were no comments to the proposed changes.

5 Lithotectonic units (KP)

Slides by KP: proposal for Lithostratigraphic Subcommission.

Starting point are the fact that lithological units frame in a tectonic context, that have hierarchical and cause-effect relationships. Previous and ongoing EU-funded research established the first concepts. Goal is to establish uniform vocabularies and a lithotectonic map of Europe. The format of an NCS subcommission seems suitable for further development in Belgium. KP will continue efforts and report about developments in the next NCS meeting.

6 AOB

Nil

The Chair closes the meeting at 11h30.